



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/802,775 | 03/18/2004 | Hiroto Nagai | NE314-US | 4705 |
| 21254 | 7590 | 10/18/2005 | EXAMINER | |
| MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817 | | | | LA, NICHOLAS T |
| ART UNIT | | PAPER NUMBER | | |
| | | 2687 | | |

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/802,775 | NAGAI, HIROTO | |
| | Examiner | Art Unit | |
| | Nicholas T. La | 2687 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 February 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 June 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>03/18/04</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The references listed in the Information Disclosure Statement filed on March 18, 2004 have been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms)

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP 608.01(o). Correction of the following is required: LRU algorithm is not defined by the specification (page 26, line 23).

Claims 5 and 14 are objected to because of the following formalities: LRU is not defined.

For the purpose of examining, it is assumed that "LRU algorithm" stands for "Least Recently Used" algorithm. Appropriate correction is required.

Art Unit: 2687

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 10-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Bahl et al. (U.S.Pat-6385454).

Regarding claims 1, and 10, Bahl teaches a method and apparatus for a mobile terminal (fig.2) comprising:

a processor for determining whether a hand-over request (col.7, line 56 to col.8, line 3), for continuing communications by switching a base station when a user moves from one cell to another (col. 7, line 65 to col. 8, line 3), is required;

a memory for storing a hand-over history performed by the processor (col. 8, line 25 to 29); wherein

based on history data of hand-over read out from the memory , the processor predicts a base station to which the user may move as a base station for performing a hand-over (col. 3, line 41 to 57, col. 4, line 13 to 30, col. 4, line 50 to 61, col. 8, line 25 to 39, and especially, col.4, line 9 to 12).

In respect of claims 2 and 11, Bahl discloses a method and apparatus for a mobile terminal, wherein the processor causes the memory to store information about

hand-over including a number of hand-over being performed and a latest update time for each base station (col. 8, line 25 to 39, and line 51 to 66).

Regarding claims 3, 4, 12 and 13, Bahl discloses a method and an apparatus comprising a system to set forward priorities to routes with the least "edit", which means the routes that most frequently used, as well as smaller than a threshold of "weight" wherein number of weight is proportional to the number that the processor has to edit the route. This is equivalent to the applicant method and apparatus of choosing the "large" number of hand-over, or "larger than the threshold" of number of the hand-over (col. 12, line 37 to col. 13, line 52), as a base station for performing a hand-over.

Regarding claims 5 and 14, Bahl discloses a method and apparatus, which have been described in the applicant claims that in a mobile terminal, "when the system has no more user profile memory to store an unmatched User's Actual Path (UAP) as a new User's Mobility Patterns (UMP), the least frequently used UMP is replaced with a new UMP if the oldest stored UMP is no more than a threshold number of days old. In case the oldest UMP is more than a threshold number of days old then this oldest UMP is replaced instead." (col. 8, line 60 to 66).

In respect of claim 6, and 15, Bahl discloses in his invention that a mobile system, wherein when a communicating condition with a base station predicted as a target of a hand-over deteriorates or traffic congestions, the processor monitors

communicating conditions with base stations adjacent to a source base station to thereby select a base station to which a hand-over is performed (col. 4, line 62 to col. 5, line 14).

Regarding claims 7 and 16, Bahl discloses methods and apparatus to determining deterioration in commuting condition to reroute the mobile station an alternative neighboring base station to reserve the quality of the electric power strength of the communication link (col. 4, line 31 to 61).

Regarding claims 8 and 17, Bahl discloses methods and apparatus to determining deterioration in commuting condition to reroute the mobile station an alternative neighboring base station to reserve the signal quality of the communication link. (col. 4, line 62 to col. 5, line 14, and col. 19, line 33 to col. 20, line 38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9 and 18 are rejected under 35 USC 103 as being anticipated by Bahl (US Patent Number 6,385,454) in view of Averbuch et al (US Patent Number 5,530,693).

Regarding claims 9 and 18, Bahl discloses the invention but does not explicitly disclose the affect of bit error rate (BER); However, in an analogous art, Averbuch et al. teaches a method and apparatus for providing packet data to a communication unit in a packet data communication system. He further discloses a handoff determination method by measuring bit error rate (BER) (col. 4, line 52 to col. 5, line 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have included a mobile unit with a processor of Bahl in view of the teachings of Averbuch et al. in order to include a feature that the processor determines the deterioration in the communicating condition based on a change in a BER from the base station to timely and effectively initiating a handoff from the neighboring base stations. This combination would potentially improve the service by reducing the amount of interruption as well as preventing the amount of dropped-calls.

Reference Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wieczorek et al. (U.S. Patent Number 6,125,278) discloses a communication resources are allocated within a radio communication system in anticipation of expected

Art Unit: 2687

resource requirements using predictions based on information supplied by a subscriber unit.

Rudrapatna et al. (U.S. Patent Number 6,052,598) discloses a system to determine the location of a mobile station directly from the network and anticipating the next cell to which the mobile station is likely to enter. It also can be adapted to project the anticipated crossing of the cell boundary so that resources in a neighboring cell to which the mobile station is projected to enter can be reserved.

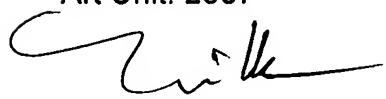
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas T. La whose telephone number is (571)-272-8075. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2687



NICHOLAS T. LA



SONNYTRINH
PRIMARY EXAMINER

Date: October 14th, 2005